Doncaster and Bassetlaw Teaching Hospitals
NHS Foundation Trust

Antimicrobial Use in Penicillin Allergy

Written by:	Larissa Claybourn, Antimicrobial Pharmacist

Date:	December 2018
Approved by:	Drugs & Therapeutics Committee
Date:	June 2019
Implementation Date:	June 2019
For Review:	June 2021

BACKGROUND

- Self-reporting of 'penicillin allergy' is common- up to 20% in hospitalised patients, and around 10% in the wider population.
- Less than 20% of patients labelled with penicillin allergy will have true hypersensitivity reactions.
- Accurate allergy history taking and documentation can prevent anaphylactic reactions and also guide appropriate antimicrobial therapy.
- Patients with history of penicillin allergy where the details are unclear may receive unnecessary broad spectrum antibiotics, which can lead to further complications (e.g. *C.difficile* infection).

AIM

The aim of this guideline is to set out how penicillin allergy should be identified and documented; and which antimicrobial agents are appropriate to use in these patients.

ALLERGY HISTORY

Allergy status **AND** nature of the allergy **MUST** be confirmed for all patients.

- In order to provide the most appropriate antimicrobial therapy, it is important to establish an accurate allergy history for patients admitted to hospital (see Appendix I).
- Allergy status should be checked on every admission for each patient. Any changes or additional details from previous admissions should be documented.

DOCUMENTATION

Allergy status **MUST** be documented in the patient's clinical record and on the current prescription (drug chart/JAC).

- If the patient does not have any allergies, a status of 'No Known Drug Allergies' should be recorded.
- Details of any allergic reaction should be recorded in as much detail as possible. This can help distinguish between a life-threatening hypersensitivity reaction and an unwanted side effect.
- The antimicrobial the patient reacted to and the source of information used (confirmed with the patient where possible) should be included. On JAC, a note can be added to provide further information.
- Undesirable effects which are NOT hypersensitivity reactions should be recorded as a sensitivity (e.g. GI disturbance).
- For notes and drug cards, entries should be signed and dated.

IMPORTANT NOTE

Check with the patient and the allergy section of the drug chart/JAC prior to all drug administrations.

Antimicrobial Use

Penicillin-based drugs should not be prescribed *and/or* administered to patients with penicillin allergy.

For suitable alternatives in patients with documented penicillin allergy, please refer to the appropriate Trust guideline for the infection being treated.

As general guidance, the list below gives information on which antibiotics are contraindicated, considered safe, or to be used with caution in patients with a penicillin allergy. For further advice, check with Microbiology or your Pharmacist.

Contraindicated (discuss with Microbiology if no suitable alternative)

Amoxicillin/Ampicillin	Flucloxacillin	Piperacillin/tazobactam
Benzylpenicillin	Phenoxymethylpenicillin	Temocillin
Co-amoxiclav	Pivmecillinam	

Caution – Not for use in patients with serious penicillin allergy i.e. anaphylaxis, breathing difficulties, facial swelling, urticarial rash or other major skin reactions (rashes which are **not raised** and **not itchy**; and developed over several days are not usually associated with severe reactions). If in doubt, contact the Microbiology Department.

Aztreonam	Cefixime	Cefotaxime	Meropenem
Cefalexin	Cefradine	Ceftazidime	Ertapenem
Cefaclor	Cefuroxime	Ceftriaxone	Imipenem

Considered Safe

Amikacin	Clindamycin	Erythromycin	Metronidazole
Azithromycin	Colistimethate	Fosfomycin	Nitrofurantoin
Ciprofloxacin	Co-trimoxazole	Linezolid	Sodium fusidate
Clarithromycin	Doxycycline	Levofloxacin	Tetracycline
			Trimethoprim

Appendix I

Questions to establish a penicillin allergy

1. What antibiotics has the patient reacted to in the past?
2. How long ago was the reaction?
3. Does the patient recall the reaction, and if not, who informed them of it?
4. How long after starting the antibiotic did the reaction occur?
5. What was the nature of the reaction?
6. Did this reaction result in hospitalisation?
7. Did the reaction resolve on stopping the antibiotic?
8. If a rash was present then:
   a. Describe the nature of the rash (e.g. pustular,urticarial),
   b. Could the rash be related to an underlying condition (e.g. viral)?
   c. How long after commencing the antibiotic did the rash appear?
9. Has the patient taken penicillin based antibiotics or similar (e.g. amoxicillin, cephalosporins) before or after the reaction? If so, did anything happen?

Points to consider

- If the patient cannot remember the reaction it is unlikely that it was severe.
- If the reaction was more than 15 years ago, it is unlikely to be repeated.
- Rashes which are not raised and not itchy; and developed over several days are not usually associated with severe reactions.

Adapted from: Jethwa, S. Penicillin allergy: identification and management. Pharm J. 2015.

Contact details for microbiology

DRI – DD 642831
BDGH – DD 572490
Out of hours – via switchboard

Acknowdgements

With thanks to Leeds Teaching Hospitals NHS Trust for sharing their original template.

References

Mirakian R, Leech SC, Krishna MT et al. BSACI Guideline. Management of allergy to penicillins and other beta-lactams. Clinical & Experimental Allergy 2015;(45):300–327.

Jethwa, S. Penicillin allergy: identification and management. Pharm J. 2015. [www.pharmaceutical-journal.com/learning/learning-article/penicillin-allergy-identification-and-management/20069170.article]

NICE Clinical Guideline (CG183), Accessed online [via www.nice.org.uk/guidance/cg183/chapter/introduction]

Drug and Therapeutics Bulletin. Penicillin allergy—getting the label right. BMJ 2017;358.